

Claims

1. A method of producing an amide from the corresponding nitrile comprising the following steps,
 - i) providing a microorganism capable of producing a nitrile hydratase biocatalyst,
 - ii) culturing the microorganism in a growth medium ,
 - iii) storing the microorganism,
 - iv) contacting the nitrile with the microorganism in an aqueous medium and thereby converting the nitrile to the amide,
- 10 wherein the microorganism is stored as none actively growing free cells in a storage medium that comprises water.
2. A method according to claim 1 in which the microorganism is recovered from the growth medium in the form of an aqueous paste comprising whole microbial cells.
- 15 3. A method according to claim 1 in which the microorganism is recovered from the growth medium and is stored as an aqueous suspension of microbial cells in a suspending medium selected from the group consisting of water, physiological saline solution, a physiological buffer solution and an aqueous liquid containing at least one component of the growth medium.
- 20 4. A method according to claim 1 in which the microorganism is retained in the growth medium.
5. A method according to any of claims 1 to 4 in which the amide is an ethylenically unsaturated amide, preferably acrylamide or methacrylamide.
6. A method according to any of claims 1 to 5 in which the components of
25 the growth medium comprised in the storage medium includes urea or a urea derivative.
7. A method according to any of claims 1 to 6 in which the microorganism is stored at a temperature above the freezing point of the storage medium, preferably above 0°C, more preferably between 4 and 30 °C.
- 30 8. A method according to any of claims 1 to 7 in which the microorganism is stored for a period of at least 2 days, preferably between 3 and 28 days.

9. A method according to any of claims 1 to 8 in which the microorganism is of the *Rhodococcus* genus, preferably of the *Rhodococcus rhodochrous* species.
10. A method according to any of claims 1 to 98 in which the microorganism
5 is *Rhodococcus rhodochrous* NCIMB 41164.